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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/562,599

04/02/2007

Benjamin Guy Davis

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06/18/2009

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EXAMINER

MOHAMED, ABDEL A

ART UNIT

PAPER NUMBER

1654

MAIL DATE

DELIVERY MODE

06/18/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/562,599	Applicant(s) DAVIS ET AL.	
	Examiner Abdel A. Mohamed	Art Unit 1654	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26, 28 and 29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-26, 28 and 29 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

ACKNOWLEDGEMENT TO THE PRELIMINARY AMENDMENT AND STATUS OF THE CLAIMS

The preliminary amendment filed 12/22/05 is acknowledged, entered and considered. In view of Applicant's request claims 4-7, 10, 11, 15-17, 22, 24, 25, 28 and 29 have been amended and claim 27 has been canceled. Claims 1-26, 28 and 29 are active and pending in the application.

ELECTION/RESTRICTION

Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions, which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1-7, 15, 16, 18-25 and 29, drawn to a method of forming a disulfide bond, the method comprising by reacting an organic compound or a method of chemically modifying a protein, peptide or amino acid comprising at least one thiol group by reacting with a compound of formula I and uses and product thereof.

Group II, claim(s) 8-14 and 17, drawn a compound of formula I and a method for preparing a compound of formula I as defined in claim 11 or claim 10, wherein the method comprises by reacting disulfide compound of formula II or formula VIII as claimed in claims 12 and 13, respectively, or wherein the method comprises by reacting

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a compound of formula V as claimed in claim 14, or use of the compound as defined in claim 8 for glycosylating a protein or a peptide or amino acid comprising at least one thiol group.

Group III, claim(s) 26, drawn to a protein, peptide or amino acid comprising at least one selenenylsulfide group, wherein the selenenylsulfide group is a group of formula $-S-Se-R_2$.

The inventions listed as Groups I and II-III do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: In regard to method of Groups I, the method does not correspond to the same technical features and are not connected in design, operation or effect because it differs in method steps, parameters and reagents used, and as such, the method of Group I is directed to a method for the formation of disulfide bonds by reacting with an organic compound of Group I and does not need the products of Groups II or III. The method of Group I is also directed to a method for the chemical modification of protein, peptide or amino acid by converting thiol group into selenenyl sulfide group for use in the glycosylation of protein of Group I. Thus, Group I comprises a method and reagents involving thiosulfonates and selenenylsulfates. Therefore, the method of Group I as recited above does not correspond to the same technical features and is not connected in

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design, operations or effects because it differ in method steps, parameters and reagents used and functions for the products of Groups II or III.

With respect to the product of Groups II and III, the compound and the protein, peptide or amino acid are related to each other by virtue of reacting disulfide compounds same, but are distinctly different products with different biological, physical and chemical structures and functions. Further, as acknowledged on page 14, lines 13-20 in the instant disclosure, the conversion of the at least one thiol group in the protein, peptide or amino acid to a selenenylsulfide group is highly site-selective and highly advantageous, as it avoids the need of any subsequent deprotection steps to be carried out in the product. Thus, the Groups require different patent and literature search and as such Groups I-III do not share the same technical features, the inventions do not relate to the same inventive concept.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

CONCLUSION AND FUTURE CORRESPONDANCE

Claims 1-26, 27 and 28 are subject to restriction and/or election requirement.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Abdel A. Mohamed whose telephone number is (571) 272-0955. The examiner can normally be reached on First Friday off.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cecilia Tsang can be reached on (571) 272-0562. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Mohamed/A. A. M./
Examiner, Art Unit 1654

/JON P WEBER/
Supervisory Patent Examiner, Art Unit 1657